

# UNIQUE IDENTIFICATION (UID)



## **UID Depot Maintenance IPT** **Redstone Arsenal** **19-20 May 2004**

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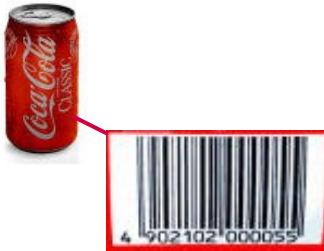


# UID: Acquisition Regulation

- ◆ The contractor shall deliver all items under a contract line, subline, or exhibit line item and determine the data qualifier strategy they will use
- ◆ Specific Requirements
  - ◆ “Item” is defined as a single hardware article or unit formed by a grouping of subassemblies, components or constituent parts
  - ◆ The requiring activity determines the necessity for UID for items with a unit acquisition cost less than \$5,000
  - ◆ The requiring activity determines whether to require a UID for subassemblies, components, and parts embedded within an item regardless of dollar value
  - ◆ Subassemblies, components and parts embedded within an item will be identified in a CDRL or other exhibit (see the Data Item Description for Use in Preparing the DD1423 (CDRL) at [www.acq.osd.mil/uid](http://www.acq.osd.mil/uid))
  - ◆ Requirements for UID and acquisition cost determination will be passed on from prime to subcontractors



# UID: What Is It?



In today's world, many items we buy have identification on them that indicate the manufacturer or distributor of the product and the product type (e.g., 12oz can of Coca-Cola Classic)

**Two identical cans of Coke from the same bottling plant will show the same data on the Universal Product Code (UPC)**



Some items also have a serial number that differentiates one item from another identical item (e.g., the 24<sup>th</sup> engine off the assembly line is different from the 1024<sup>th</sup>)

**Serial numbers are unique, but not outside of their enterprise – the serial number assigned by XYZ Manufacturer could be the same as one assigned by ABC Company**



By combining enterprise identification, item class and serialization, a globally unique item identifier is created that differentiates every item from other items

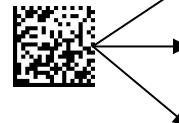
**Each item has its own globally unique identifier (UID)**



# UID: How is it Constructed?

The UID shall be derived from its discrete component data elements - the UID is not required to be marked on the item as a separate data element

From the Data Matrix:



Enterprise Identifier	= 0CVA5 (CAGE Code)
Original Part Number	= 1234
Serial Number	= <b>674A36458</b>

The UID can be derived using the IAC for CAGE, which is “D”:

UID Construct 1	UID Construct 2
<i>If the Serial Number is Unique within the Enterprise Identifier</i>	<i>If the Serial Number is Not Unique within the Enterprise Identifier but is Unique within the Part Number</i>
<b>00CVA5674A36458</b>	<b>00CVA51234674A36458</b>



# UID Policy Update

- ◆ *Air Transport Association (ATA) Coordinating Group **APPROVED** ISO 15434 wrapped TEIs as an alternative to Spec 2000*
- ◆ ISO ADC1 TG2 recommends U.S. TAG approve New Item Work Proposal for a new format code to ISO/IEC 15434 to allow Text Element Identifiers (TEIs) and forward to SC31
  - **IMPORTANT:** Vote by US TAG ongoing and ends May 21
- ◆ Final DFARS rule for capturing the acquisition cost of tangible items and placing UID data on them at acquisition on Track to be published June 2004
- ◆ Specific guidance related to UID requirements can be found by referring to the following sources:
  - DFARS dated 30 December 30, 2003
  - DoD Guide to Uniquely Identifying Items
  - [www.acq.osd.mil/uid](http://www.acq.osd.mil/uid)



# UID: Database Data Transmission

The contractor is required to transmit, upon shipment notification, UID database data in addition to the data in the Data Matrix symbol and in addition to any data previously required during shipment notification

## **End Item Database Data (15)**

- ◆ **UID (Concatenated)**
- ◆ Descriptive Data
  - UID Data Elements (3)
  - Issuing Agency Code
  - UID Type
  - Item Description
  - Unit of measure
- ◆ Acquisition Data
  - Contractor
  - Contract Number
  - CLIN/SLIN/ELIN
  - Price
  - Acceptance Code (identifies acceptor)
  - Acceptance Date
  - Ship to code

includes:

## **Embedded Items of End Items (10)**

- ◆ UID (Concatenated)
- ◆ Descriptive Data
  - UID Data Elements (3)
  - Issuing Agency Code
  - UID Type
  - Item Description
  - Unit of measure
- ◆ **Parent UID as of delivery date**
- ◆ GFP flag

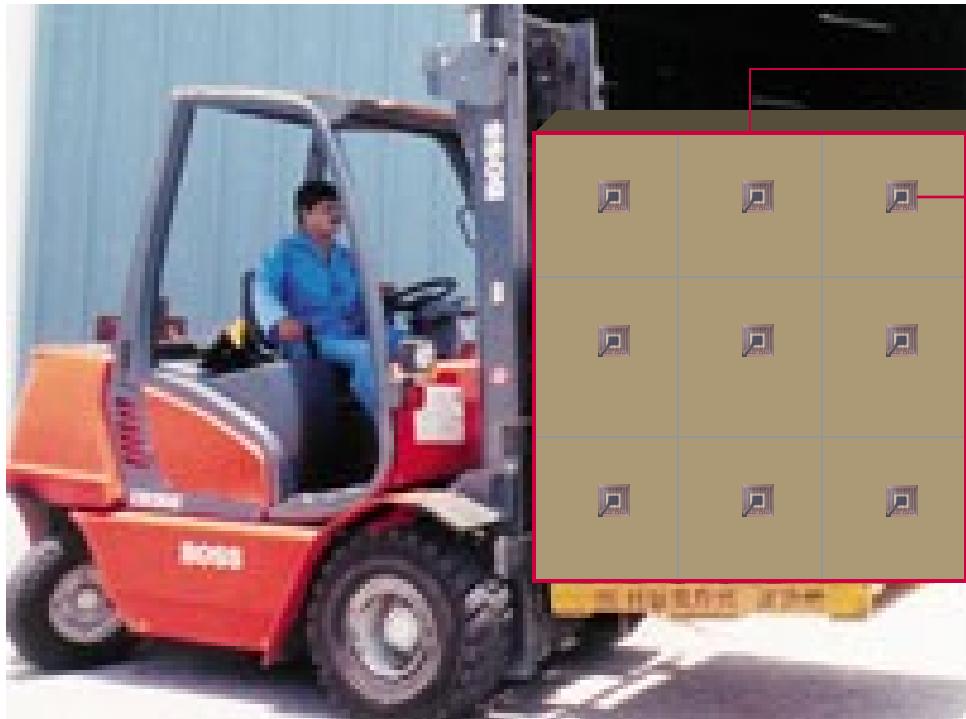


# **UID - RFID Relationship**



# UID-RFID Policy Relationship

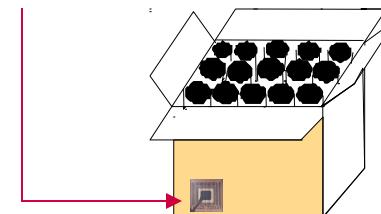
**According to current DoD Policy, RFID tags that carry data are required to be attached to packages at multiple levels, including item packages, cases, and pallets. Unique Identifiers are required to be attached or directly marked on items using a data matrix to carry the UID data elements.**



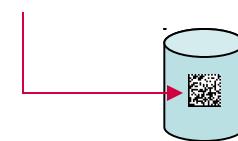
RFID Tag (Pallet Level)

RFID Tag (Case Level)

RFID Tag (Item Package Level)



UID Data Matrix (Item Level)





# UID-RFID Database Data Relationship

## End Item Database Data (15)

- ◆ UID (Concatenated)
- ◆ Descriptive Data
  - UID Data Elements (3)
  - Issuing Agency Code
  - UID Type
  - Item Description
  - Unit of measure
- ◆ Acquisition Data
  - Contractor
  - Contract Number
  - CLIN/SLIN/ELIN
  - Price
  - Acceptance Code (identifies acceptor)
  - Acceptance Date
  - Ship to code

## Embedded Items of End Items (10)

- ◆ UID (Concatenated)
- ◆ Descriptive Data
  - UID Data Elements (5)
  - Item Description
  - Unit of measure
- ◆ Parent UID as of delivery date
- ◆ GFP flag

## RFID Data at the Pallet Level

- ◆ Pallet EPC
- ◆ Shipping Data

## RFID Data at the Case Level

- ◆ Pallet EPC
- ◆ Case EPC

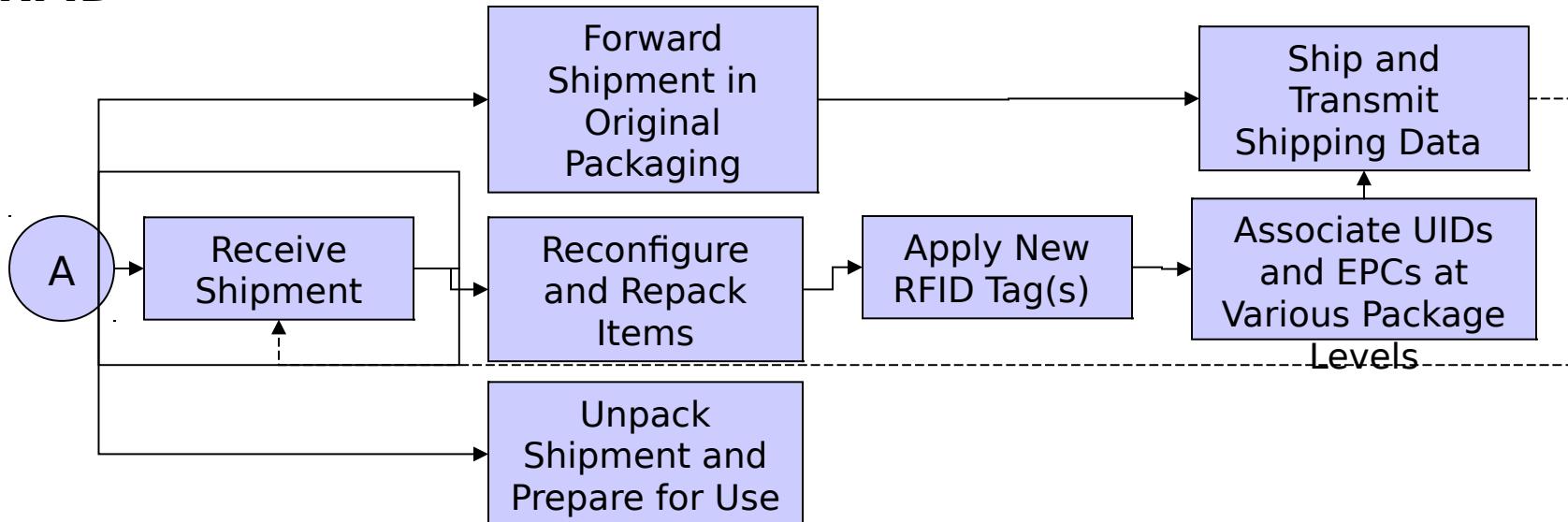
## RFID Data at the Item Package Level

- ◆ Case EPC
- ◆ Item Package EPC



# UID-RFID Process Relationship

## RFID

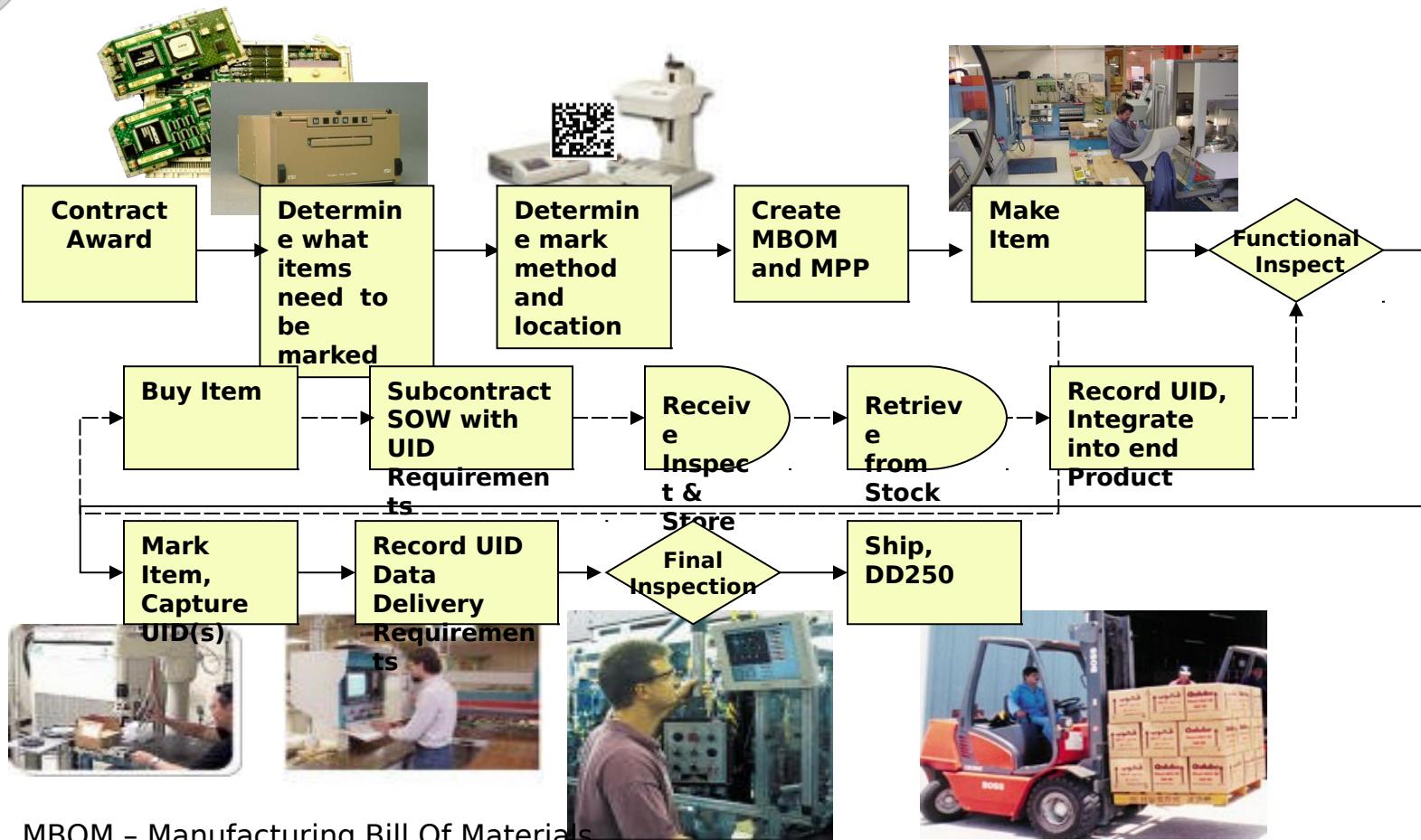


**Applies to all shipments, except  
between:**

- ✓ Tier 2 and Tier 1 Suppliers
- ✓ Household Goods Contractors



# UID Vendor Perspective



MBOM - Manufacturing Bill Of Materials  
MPP - Manufacturing Process Planning

**Issue: Existing marking processes must be able to accommodate UID requirements.**

***Impact: leveraged.*** *Existing investments in marking infrastructure are*



# Benefits to Industry

- ◆ UID establishes a common key for sharing digital data as well as replacement parts across several enterprises, both suppliers and customers, global and domestic
- ◆ As a result of sharing more data across the supply chain, over time operational efficiency for all supply chain partners will increase (e.g., Lower administrative costs to gather and/or reconcile data)
- ◆ Improvements in the ability to track, value, and control items apply to a prime contractor that purchases items from a subcontractor (*similar to the benefits that DoD will get from its suppliers*)
  - Improved failure analysis within vendor supply chain
  - Improved returns tracking to specific-item level
- ◆ UID creates a necessity for standardized item serialization throughout every organization (if not currently done)
- ◆ More data can be stored in a 2-D Data Matrix than a traditional 1-D Bar Code in the same footprint

# Rolls-Royce UID Implementation



# Advice on Getting Started

- ◆ Establish an Implementation Team
- ◆ Become familiar with the DFARS Policy and supporting material.
- ◆ Establish a POC
- ◆ Schedule regular meeting sessions
- ◆ Establish effective communication channels
- ◆ Attend sessions on UID, DPM, WAWF, and RFID
- ◆ Keep the organization informed



# UID Policy Impact on Rolls-Royce

- ◆ DoD 2-D marking specification requirement (as invoked through Mil Std 130L) is a significant change
- ◆ Rolls-Royce and industry cannot afford to implement dual or multiple marking specs IAW ISO 15434 and ATA Spec 2000
- ◆ Rolls-Royce is working with DoD, the Aerospace Industries Association (AIA) and the Air Transport Association (ATA) to agree on a converged standard between the ATA Spec 2000 and ISO 15434 formats
- ◆ Rolls-Royce must revise it's corporate specification by July/Aug to meet the DoD UID policy requirements through out it's supply chain.



# Notice to Suppliers (NTS)

- ◆ Review your component specifications and understand what changes will be required to implement data matrix marking
  - ◆ Vibro peen will NOT be acceptable for FINAL part marking.
- ◆ Review and understand the optimum marking process for your parts
- ◆ Review your options
  - ◆ Sub contract marking?
  - ◆ Alternative marking processes
  - ◆ Drawing alteration.....
- ◆ Develop plans to implement Direct Part Marking NOW
- ◆ Investment 'may' be required
- ◆ Implementation is NOT optional



# Where to Find Additional Info

- ◆ UID Web Site – <http://www.acq.osd.mil/uid/>
- ◆ Mil Std 130L (10 October 2003)
- ◆ DoD Guide to Uniquely Identifying Items
- ◆ Mil Std 129P –  
<http://www.dscc.dla.mil/offices/packaging/specstdslist.html#STDs>  
)
- ◆ WAWF – <https://wawf.eb.mil>
- ◆ WAWF Training web site – [www.wawftraining.com](http://www.wawftraining.com)

START PLANNING NOW and GET INVOLVED

# **Government Furnished Property & UID Registry**

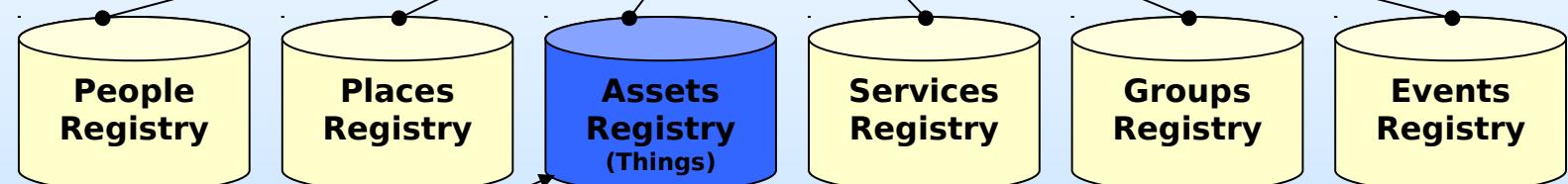


# UID Registry Concept

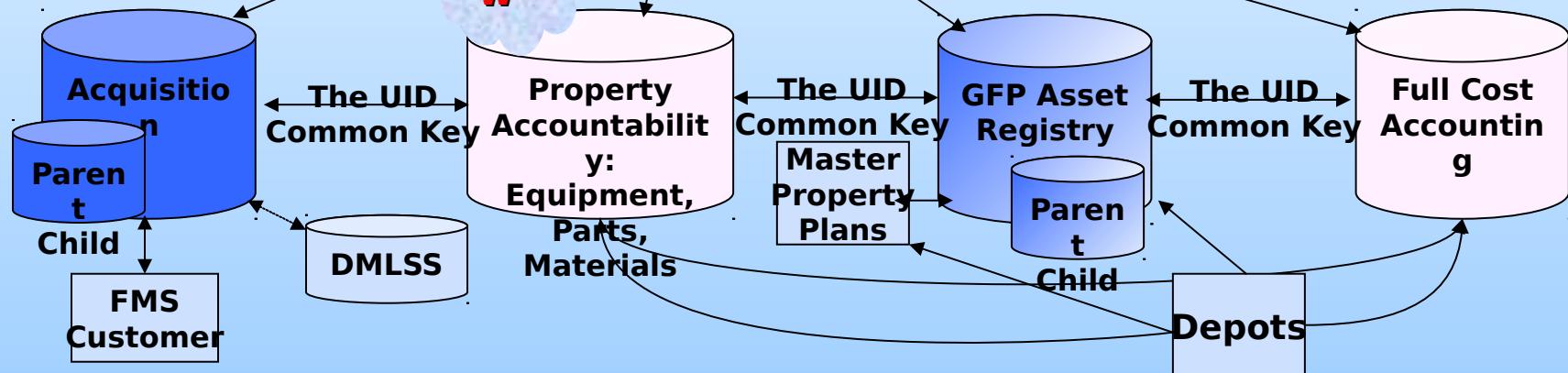
## Rules



## Keys



## Context





# Government Furnished Property (GFP)

## Registry Concept

- 100% GFP UIDed for Asset Accountability & Valuation
- Track UID Items in Contractor Custody
- GFP Marked with UID by Issuing Source

### GFP Items

- By Company
- By Program

### Contractor GFP Master Plans

#### GFP in Storage

- Assign Alias UID
- Mark with UID when Placed in Use

#### GFP in Use

- Assign Alias UID
- Mark with UID when Item Possession is transferred



### GFP Registry of Alias UIDs

- Custodian CAGE
- GFP Item UID
- Date Issued
- Date Received
- Requiring Contract Number
- Parent/Child Relationships



#### GFP in GOCO

- As specified in Operating Contract

### Property Accountability Systems

### UID Registry (GFP UIDs Flagged)

### Maintenance Systems



# What's Next

## DRAFT UID Legacy Items Policy

- ◆ *Forecast for application of UID to legacy items (in-service/inventory)*
- ◆ *Component PMs and item managers plan now for UID of legacy items*
- ◆ *Planning should include:*
  - *Program plans addressing mission critical warfighting and combat support systems, and controlled inventory items must be submitted to the CAEs by October 1, 2004*
  - *CAEs present the plans to the Acting Under Secretary of Defense (Acquisition, Technology and Logistics) by November 30, 2004*
  - *Programs complete UID marking of legacy assets by December 31, 2009*
  - *Budget planning to provide resources necessary to achieve this deadline*
  - *Address modification of on-going contracts in effect as of January 1, 2004, and Program Executive Officer exemptions for items phased out of operational use and inventory by December 31, 2009*
  - *Planning should address process reengineering to enable UID marking to be used in existing acquisition and logistics processes*
- ◆ *Planning must be based on the value proposition that UID of legacy items provides a joint data capability that enables achievement of focused logistics and performance-base logistics strategies*



# DRAFT Decision Tree for Embedded Items

